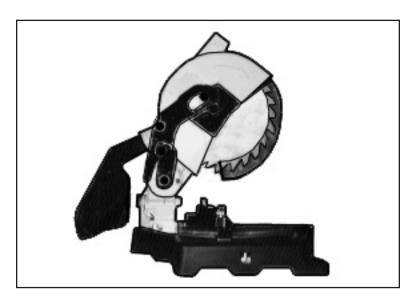


8-1/4" COMPOUND MITER SAW

Model 42654

ASSEMBLY AND OPERATING INFORMATION





3491 Mission Oaks Blvd., Camarillo, CA 93011 Visit our Web site at http://www.harborfreight.com

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For technical questions please call 1-800-444-3353.

Revised Manual 02/02

SPECIFICATIONS TABLE

Power Consumption	110 VAC, 60 Hz, 800 Watts, 1 HP 3 Amps w/No Load, 4.5 Amps w/Load
Power Cable	6-1/2 Feet, UL listed, 18 AWG, 2 Prong Polarized Plug
Motor Speed	4,500 RPM
Fence Dimensions	13-3/8" x 1-3/8"
Table Dimensions	15-1/4" L x 4-1/2" D
Cutting Capacity	0 to 90 Degrees: 3" H x 3-1/4" L 45 to 90 Degrees: 2" H x 3-1/4" L
Saw Blade Tilt Capacity	0 to 45 Degrees (right and left) 90 to 45 Degrees Compound
Shaft Diameter	5/8" Arbor
Scales	In Inches and Degrees
Saw Blade	8-1/4", Carbide Tipped, Saw
Features	Retractable Blade Guard Safety Power Switch
Accessories	Dust Collector Bag 2 Carbon Replacement Brushes for Motor Deep Socket Wrench Clip Washer Wrench
Weight	15.8 Pounds

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance, and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

- 1. **KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp or wet work areas invite injuries.
- 2. **KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product.
- 3. **STORE IDLE EQUIPMENT.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment and keep out of reach of children.

- 4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
- 5. **USE EYE, HEARING, AND BREATHING PROTECTION.** Wear ANSI-approved safety impact eyeglasses, ANSI approved hearing protectors, and ANSI-approved dust mask or respirator when using this product. ANSI approved safety impact eyeglasses, hearing protectors, and dust masks and respirators are available from Harbor Freight Tools.
- 6. **DRESS SAFELY.** Nonskid footwear or safety shoes should be used when working with this product. Do not wear loose clothing or jewelry as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.
- 7. INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENTS.
- 8. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
- 9. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
- 10. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
- 11. **REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
- 12. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this tool clean and dry, and keep saw blades clean and sharp for better and safer performance.
- 13. MAINTENANCE: For your safety, service and maintenance should be performed regularly by a qualified technician.
- 14. **USETHE RIGHT PRODUCT FOR THE RIGHT JOB.** There are certain applications for which this product was designed. Do not use small equipment, tools or attachments to do the work of larger industrial equipment, tools or attachments. Do not use this product for a purpose for which it was not intended.
- 15. WARNING: The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

- 1. MAKE SURE THE POWER SWITCH (82) IS IN THE "OFF" POSITION BEFORE PLUGGING IN THE POWER CABLE (93).
- 2. **DO NOT ABUSE THE POWER CABLE.** Do not use the Power Cable (93) to pull the Plug from a power outlet. Keep the Power Cable away from heat, oil, sharp edges, and moving parts. Replace a damaged Power Cable immediately. Route the Power Cable safely. Protect it from being damaged by other equipment in the shop. Do not route the Power Cable where it can be walked on or tripped over.

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120 OR 240 VOLT)							
NAMEPLATE AMPERES	EXTENSION CORD LENGTH						
(at full load)	25 Feet	50 Feet	75 Feet	100 Feet	150 Feet		
0 – 2.0	18	18	18	18	16		
2.1 – 3.4	18	18	18	16	14		
3.5 - 5.0	18	18	16	14	12		
5.1 – 7.0	18	16	14	12	12		
7.1 – 12.0	18	14	12	10	-		
12.1 – 16.0	14	12	10	-	-		
16.1 – 20.0	12	10	-	-	-		
* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.							

- 3. IF YOU USE AN EXTENSION CORD, MAKE SURE TO USE ONLY UL LISTED CORDS HAVING THE CORRECT GAUGE AND LENGTH. (SEE BELOW.)
- 4. **MAINTAIN A SAFE WORK ENVIRONMENT.** Do not use this product in or near damp or wet areas. Do not expose this product to rain. Keep the work area well lit. Make sure there is adequate surrounding workspace. Use this product in a well ventilated area. Do not operate this product in the presence of flammable liquids, gases, or dust. To avoid accidental electric shock, do not let your body come in contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.
- 5. **DO NOT FORCE THE EQUIPMENT.** The Compound Miter Saw will do the work better and safer at the speed and capacity for which it was designed.
- 6. KEEP ALL GUARDS IN PLACE AND IN WORKING ORDER.
- 7. REMOVE ALL ADJUSTING WRENCHES FROM THE COMPOUND MITER SAW BEFORE TURNING IT ON.
- 8. **AVOID UNINTENTIONAL STARTING.** Make sure you are prepared to begin work before turning the Power Switch (82) "ON".

- DO NOT USE THIS TOOL FOR CUTTING METALS OR BRITTLE MATERIALS.
 Do not cut dangerous materials, such as asbestos that can cause harmful dust or vapors.
- 10. ALLOWTHE SAW BLADE (70) TO SPIN UP TO FULL SPEED BEFORE FEEDING WOOD INTO IT. When turning it off, allow the Saw Blade to spin down and stop on its own. Do not press against the Saw Blade to stop it.
- 11. <u>NEVER PASS HANDS DIRECTLY UNDER THE SAW BLADE (70) WHEN CUTTING THE WORK PIECE. Always</u> keep hands and fingers a safe distance away from the moving Saw Blade.
- 12. **DO NOT FORCE THE MATERIAL INTO THE SAW BLADE (70) WHEN CUTTING.** Apply moderate pressure, allowing the Saw Blade to cut without being forced.
- 13. NEVER ATTEMPT TO REMOVE MATERIAL STUCK IN THE MOVING PARTS OF THE COMPOUND MITER SAW WHILE IT IS PLUGGED IN AND RUNNING.
- 14. TURN OFF THE COMPOUND MITER SAW IF THE BLADE IS TO BE BACKED OUT OF AN UNCOMPLETED CUT.
- 15. MAKE SURETHE WORK PIECE IS FREE FROM NAILS AND ANY OTHER FOR-EIGN OBJECTS WHICH COULD DAMAGE THE SAW BLADE (70).
- 16. ALWAYS FEED THE WORK PIECE INTO THE SAW BLADE (70) AND AGAINST ITS ROTATION.
- 17. MAKE SURETHE WORK PIECE IS SUPPORTED AT ALL TIMES DURING OPERATION. Use a Roller Stand (not provided) with larger work pieces if necessary.
- 18. BEFORE TRYING NEW OR COMPLICATED TECHNIQUES, STUDY THE PRO-CEDURE AND PRACTICE WITH SCRAP WOOD.
- 19. ALWAYS DISCONNECTTHE COMPOUND MITER SAW FROM ITS ELECTRICAL SUPPLY SOURCE BEFORE PERFORMING ANY SERVICES OR MAINTENANCE.

 Make sure to turn off the Compound Miter Saw when leaving the work area, moving the tool from one location to another, changing Saw Blades (70), cleaning sawdust from the unit, etcetera.
- 20. WARNING: People with pacemakers should consult with their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.
- 21. WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contain chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks and cement or other masonry products, arsenic and chromium from chemically treated lumber. Your risk from these exposures varies, depending on

how often you do this type of work. To reduce your exposure to these chemicals; work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)

UNPACKING

When unpacking, check to make sure all parts shown on the Parts List (page 17) are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

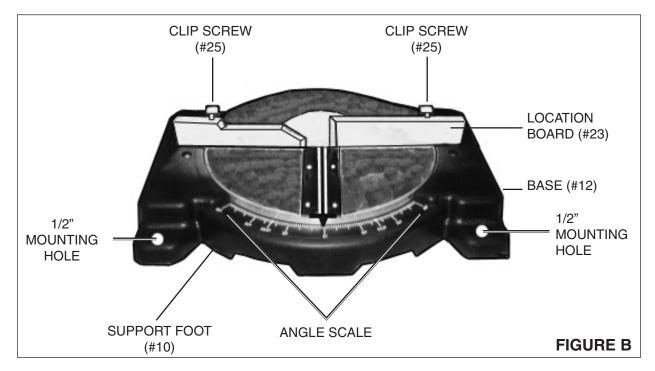
ASSEMBLY INSTRUCTIONS

NOTE: For additional references to the parts listed below, refer to the Assembly Diagram on page 18 of this manual.

WARNING: Ensure that this item is completely and properly assembled before use. Use of this item without all guards and/or safety devices in place can result in SERIOUS PERSONAL INJURY or DEATH.

To Mount The Compound Miter Saw On A Workbench:

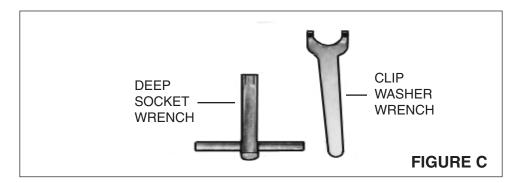
- 1. **Caution:** Prior to mounting the Compound Miter Saw onto a workbench, make sure the Compound Miter Saw is disconnected from its electrical power source.
- 2. With assistance, set the Compound Miter Saw in a desired location on the workbench. NOTE: Make sure the workbench provides a flat, level, sturdy surface capable of supporting the weight of the Compound Miter Saw, tool accessories, and work pieces.



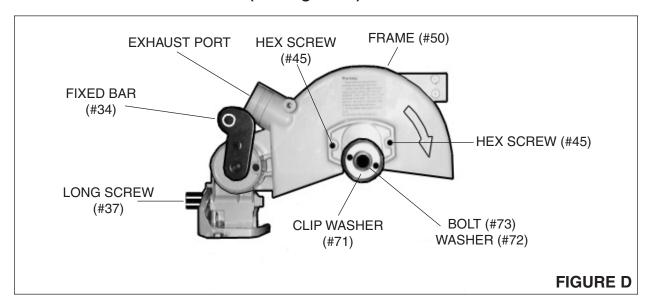
- 3. Use the two mounting holes located on the Support Feet (10) of the Compound Miter Saw as a template, and mark the two points at which two holes will be drilled through the workbench. Then, temporarily set the Compound Miter Saw aside. (See Figure B, and Assy. Diagram.)
- 4. With a drill and a 1/2" drill bit (not provided), drill the two holes downward through the top of the workbench.
- 5. Align the two mounting holes in the Support Feet (10) with the two previously drilled holes in the workbench. Then secure the Compound Miter Saw to the workbench, using two 1/2" bolts of appropriate length, two lock washers, and two nuts (not provided).
- 6. **NOTE:** Should you choose to use clamps (instead of bolts) to secure the Compound Miter Saw to the workbench, make sure the clamps (not provided) are of sufficient size and strength to hold the Compound Miter Saw in place.

To Install A Saw Blade:

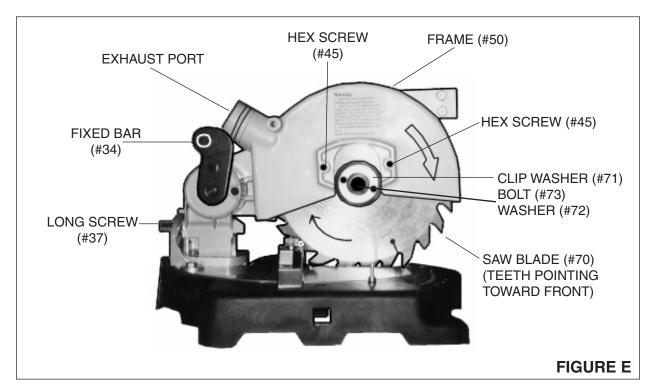
- 1. Caution: Prior to installing the Saw Blade (70), make sure the Compound Miter Saw is disconnected from its electrical power source.
- 2. Caution: Never use a Saw Blade larger or smaller in diameter than 8-1/4", and rated less than 4,500 RPM operation.



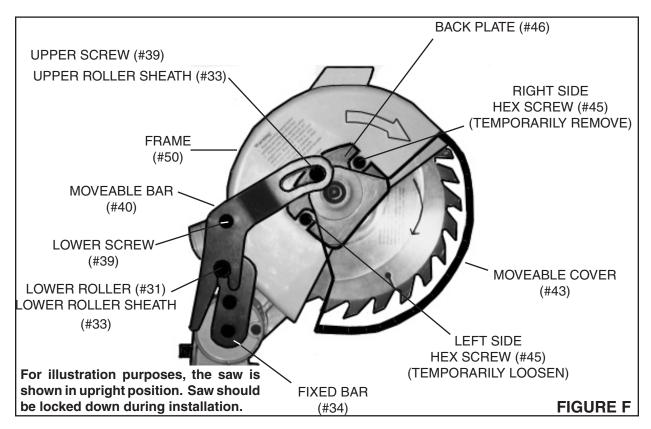
3. **NOTE:** This procedure requires the use of the *Deep Socket Wrench* and *Clip Washer Wrench* tool accessories. (See Figure C.)



- 4. Insert the two prongs of the *Clip Washer Wrench* into the two holes in the Clip Washer (71), and hold the Clip Washer in place to prevent the Shaft (62) from turning. **(See Figures C, D, and Assy. Diagram.)**
- 5. Use the *Deep Socket Wrench* to unscrew and remove the Bolt (73), Washer (72), and Clip Washer (71). (See Figures C, D, and Assy. Diagram.)



- 6. Raise and hold the Frame (50) while inserting the Saw Blade (#70) onto the Shaft (62). NOTE: Make sure the teeth of the Saw Blade point toward the *front* of the Miter Saw, and the *arrows* shown on the Frame and Saw Blade point in the same direction. (See Figure E, and Assy. Diagram.)
- 7. Allow the Frame (50) to automatically return to its original position.
- 8. Place the Clip Washer (71) and Washer (72) back onto the Shaft (62). Then, retighten the Bolt (73) onto the Shaft.
- 9. **NOTE:** Once this procedure is completed, make sure to remove the *Deep Socket Wrench* and *Clip Washer Wrench* from the Compound Miter Saw.



To Attach The Moveable Cover: (See Figure F, and Assy. Diagram.)

- 1. **Caution:** Prior to installing the Moveable Cover (43), make sure the Compound Miter Saw is disconnected from its electrical power source.
- 2. Use the lock button Plastic Ball (51) to secure the saw arm in its lowered position.
- 3. Locate the two Hex Head Screws (45) on the frame. Use the wrench provided to remove the front screw, and to loosen the rear screw a few turns.
- 4. Use a cross head screwdriver (not included) to remove Screw (39) and Roller (33) from the guard assembly.
- 5. Hold the blade guard assembly with the plastic cover down. With your other hand, rotate the spring plate clockwise approximately one turn so there is tension on the spring. Catch the rear slot in the plate under the head of rear Screw (45). Then align the holes, and install the front Screw. Tighten both, and release the guard carefully.
- 6. Check to make certain that the rear (forked) end of bar (40) is under the head of the screw that guides it. Now release the lock button plastic ball (51), and raise the saw arm. Align the forward slot in bar (40) with the threaded brass bushing in the spring plate. Install screw (39) and roller (33) through the slot and into the bushing.
- 7. Check that all screws are tightened and for correct operation of the guard. It should move downward to cover the blade as the saw is lowered.

To Attach The Moveable Bar:

- 1. Caution: Prior to installing the Moveable Bar (40), make sure the Compound Miter Saw is disconnected from its electrical power source.
- 2. Temporarily remove the Upper Screw (39) and Upper Roller Sheath (33). (See Figure F, and Assy. Diagram.)
- 3. Temporarily remove the Lower Screw (39)
- 4. Slide the <u>lower slot</u> of the Moveable Bar (40) beneath the Lower Roller (31) and let the slot rest upon the Lower Roller Sheath (33). (See Figure F, and Assy. Diagram.)
- 5. Align the *upper slot* of the Moveable Bar (40) with the threaded mounting hole as shown in **Figure F**.
- 6. Replace and tighten the Upper Screw (39) and Upper Roller Sheath (33) through the *upper slot* of the Moveable Bar (40). **(See Figure F, and Assy. Diagram.)**
- 7. Insert the Lower Screw (39) through the <u>middle mounting hole</u> of the Moveable Bar (40) and tighten the Screw.

 (See Figure F, and Assy. Diagram.)

To Attach The Dust Bag:

- 1. **Caution:** Prior to attaching the Dust Bag (54), make sure the Compound Miter Saw is disconnected from its electrical power source.
- 2. Use the spring clamp on the Dust Bag to secure the Dust Bag (54) to the Exhaust Outlet on the Frame (50). (See Figures D, E, and Assy. Diagram.)
- 3. When the Dust Bag (54) is half full remove it from the Compound Miter Saw, and empty it. NOTE: You may also attach a hose from a shop vacuum (not provided) to the Exhaust Outlet on the Frame (50) for more efficient dust collection. (See Figures D, E, and Assy. Diagram.)

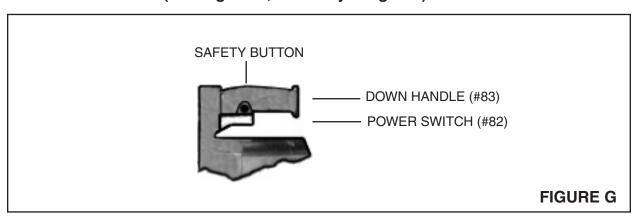
OPERATING INSTRUCTIONS

WARNING: Ensure that this item is completely and properly assembled before use. Use of this item without all guards and/or safety devices in place can result in SERIOUS PERSONAL INJURY or DEATH.

NOTE: For additional references to the parts listed below, refer to the Assembly Diagram on page 18 of this manual.

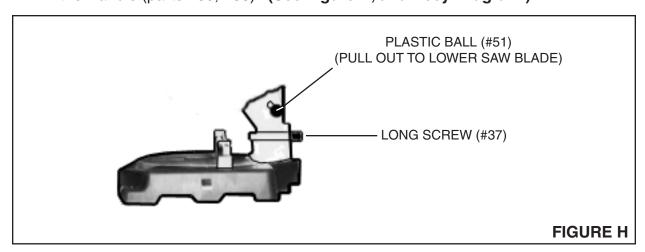
The Power Switch:

To turn on the Compound Miter Saw, push in the Safety Button and squeeze the Power Switch (82). To turn off the Compound Miter Saw, release pressure on the Power Switch. (See Figure G, and Assy. Diagram.)



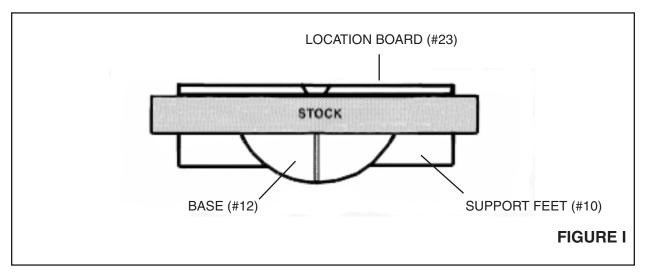
To Lower The Saw Blade:

<u>NOTE:</u> The Compound Miter Saw automatically locks in place in the *up* position. To lower the Saw Blade (70), pull out on the Plastic Ball (51), and pull down on the Handle (parts #80, #83). **(See Figure H, and Assy. Diagram.)**



To Make A Basic 90 Degree Cut:

1. Properly position the wood stock against the Location Board (23). (See Figure I, and Assy. Diagram.)



- 2. Plug the Power Cable (93) into a grounded, three prong, 120 Volt, electrical outlet.
- 3. Pull out on the Plastic Ball (51), and pull down slightly on the Saw Handle (80, 83). (See Figure H, and Assy. Diagram.)
- 4. Squeeze the Power Switch (82) to power the Compound Miter Saw. Allow the Saw Blade (70) to reach its maximum speed before starting the cut. (See Figures E, G, and Assy. Diagram.)
- 5. Lower the Saw Blade (70) into the wood stock, pressing gently down. Do not force the tool. Allow the Saw Blade to do its work as you feed it into the wood stock. Continue with the cut until completed. Do not stop midway. (See Figure E, and Assy. Diagram.)
- 6. When the cut is completed, release the Power Switch (82) and wait for the Saw Blade (70) to stop turning before raising the Saw Blade to its up position. (See Figures E, G, and Assy. Diagram.)
- 7. Remove the cut wood stock from the Compound Miter Saw, and unplug the tool from its electrical power supply outlet.

To Adjust The Angle Of The Cut:

- 1. **Caution:** Prior to adjusting the angle of the cut, make sure the Compound Miter Saw is disconnected from its electrical power source.
- 2. **NOTE:** The angle of cut may be adjusted up to 90 degrees to the left or right. (See Figure B, and Assy. Diagram.)
- 3. Lift the Handle (parts #80, #83) up and allow it to lock in place. (See Assy. Diagram.)
- 4. Loosen the two Clip Screws (25), and turn the Base (12) right or left to the desired angle indicated on the <u>Angle Scale</u>.
 (See Figures B, I, and Assy. Diagram.)
- 5. Retighten the two Clip Screws (25) to lock the desired angle of cut in place. (See Figure B, and Assy. Diagram.)
- 6. Properly position the wood stock against the Location Board (23). (See Figure I, and Assy. Diagram.)
- 7. Follow Steps #1 through #7 in the previous section to complete the procedure.

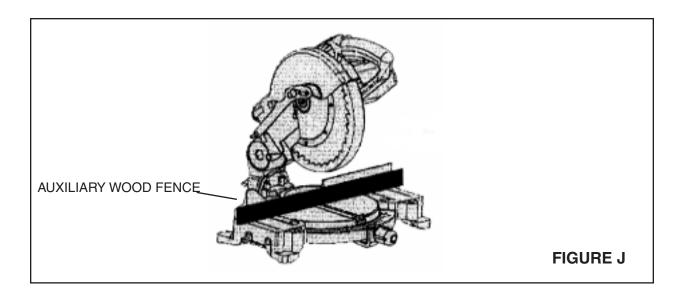
To Adjust The Bevel Angle:

- 1. Caution: Prior to adjusting the bevel angle, make sure the Compound Miter Saw is disconnected from its electrical power source.
- 2. NOTE: The Saw Blade (70) can be angled up to 45 degrees to the left by adjusting the Long Screw (37) located at the back of the Compound Miter Saw. (See Figures D, E, F, H, and Assy. Diagram.)
- Loosen the Long Screw (37), and rotate the Saw Blade (70) to the desired bevel angle. Then, retighten the Long Screw.
 (See Figures D, E, F, H, and Assy. Diagram.)

To Attach An Auxiliary Wood Fence:

1. <u>Caution:</u> When performing multiple or repetitive cutoff operations that result in small cutoff pieces (1" or less), the Saw Blade (70) may catch the cutoff pieces and project them away from the Compound Miter Saw or into the Moveable Cover (43) and Frame (50). This can result in personal injury or damage to the tool. An Auxiliary

- Wood Fence (not provided) can be mounted to the Compound Miter Saw to limit the possibility of personal injury or damage to the Moveable Cover and Frame.
- 2. To mount an Auxiliary Wood Fence, securely attach the Auxiliary Wood Fence (constructed of straight wood approximately 1/2" thick, 3" high, by 20" long) to the Fence (23). **NOTE:** The Auxiliary Wood Fence is used *only* when the Saw Blade (70) is in the 0 degree bevel position (90 degrees to the Base (12). When bevel cutting (Saw Blade tilted), the Auxiliary Wood Fence must be removed. (See Figure J, and Assy. Diagram.)



INSPECTION, MAINTENANCE, AND CLEANING

- 1. **Caution:** Always disconnect the Compound Miter Saw from its electrical power supply source before performing any inspection, maintenance, or cleaning.
- 2. Before each use, inspect the general condition of the Compound Miter Saw. Inspect the Power Switch (82), Power Cable and Plug (93), and extension cord (if used) for damage. Check for loose screws, misalignment, binding of moving parts, broken, cracked, or improper mounting of the Saw Blade (70), broken parts and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn off the Compound Miter Saw immediately and have the problem corrected before further use. Do not use damaged equipment.
- 3. Periodically remove the two Brush Boxes (90) with a screwdriver to inspect the condition of the two Carbon Brushes (89). If the Carbon Brushes are simply dirty, you may carefully clean them with a pencil eraser. The Carbon Brushes have wear limit markings on them. You may safely use the Carbon Brushes up to the wear limit. When they have worn up to the wear limit, the Carbon Brushes must be replaced. For proper operation, the Carbon Brushes must be replaced in *pairs*. When replacing the Carbon Brushes make sure they neatly fit into their Brush Boxes (90), and

that the springs on the Carbon Brushes operate freely. Be sure the carbon portion of the Carbon Brushes contacts the motor's Rotor (102), and the springs face away from the Rotor. After inspection or replacement, replace the Brush Boxes with a screwdriver and tighten firmly. (See Assy. Diagram.)

- 4. With a brush, soft cloth, or vacuum, remove all sawdust from the Compound Miter Saw.
- 5. Do not use solvents to wipe off the Compound Miter Saw, as damage may result. If necessary, wipe with a damp cloth. You may use a mild detergent.
- 6. Do not introduce water or other liquids into the electric motor through the motor vents.
- 7. Once clean, lubricate all moving parts with a light weight oil.
- 8. When storing, keep the Compound Miter Saw covered with a cloth cover.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Parts List

Part Description Qr 1 Nut M8 1 2 Washer 08 2 3 Spring Washer 08 1 4 Push Pin 1 5 Hex Key M10x12 1 6 Foot 5 7 Location Spring 1 8 Location Ball 08 1 9 Pressure Board 2 10 Support Feet 1 11 Screw M6x12 2 12 Base 1 13 Indicator 2 14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board	
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7 Location Spring 1 8 Location Ball 08 1 9 Pressure Board 2 10 Support Feet 1 11 Screw M6x12 2 12 Base 1 13 Indicator 2 14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M5x12 1 31 Roller 1 32 Washer 05	
8 Location Ball 08 1 9 Pressure Board 2 10 Support Feet 1 11 Screw M6x12 2 12 Base 1 13 Indicator 2 14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35	
9 Pressure Board 10 Support Feet 11 Screw M6x12 22 12 Base 13 Indicator 24 Screw M4x8 15 Nut M6 26 Base Board 27 Screw M4x8 28 Plastic Bar 29 Square Washer 20 Square Washer 21 Nut M12 22 Bolt M6x18 23 Location Board 24 Hex-Screw M6x32 25 Clip Screw 26 Roller Pin A10x65 27 Seat 28 Hex Screw M6x18 29 Pin A 30 Hex Screw M5x12 31 Roller 32 Washer 05 33 Roller Sheath 34 Fixed Bar 11 Screw M6x12 25 Pin 16 Prin A10x65 17 Seat 28 Hex Screw M6x18 29 Pin A 30 Hex Screw M5x12 31 Roller 32 Washer 05 33 Roller Sheath 34 Fixed Bar 35 Pin	
10 Support Feet 1 11 Screw M6x12 2 12 Base 1 13 Indicator 2 14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35	
11 Screw M6x12 2 12 Base 1 13 Indicator 2 14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
12 Base 1 13 Indicator 2 14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
13 Indicator 2 14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
14 Screw M4x8 1 15 Nut M6 6 16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
15 Nut M6 16 Base Board 17 Screw M4x8 18 Plastic Bar 20 Square Washer 21 Nut M12 22 Bolt M6x18 23 Location Board 24 Hex-Screw M6x32 25 Clip Screw 26 Roller Pin A10x65 27 Seat 28 Hex Screw M6x18 29 Pin A 30 Hex Screw M5x12 31 Roller 32 Washer 05 33 Roller Sheath 34 Fixed Bar 35 Pin	
16 Base Board 1 17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
17 Screw M4x8 1 18 Plastic Bar 2 19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
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19 Bias Block 2 20 Square Washer 2 21 Nut M12 2 22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
20 Square Washer 21 Nut M12 22 Bolt M6x18 23 Location Board 24 Hex-Screw M6x32 25 Clip Screw 26 Roller Pin A10x65 27 Seat 28 Hex Screw M6x18 29 Pin A 30 Hex Screw M5x12 31 Roller 32 Washer 05 33 Roller Sheath 34 Fixed Bar 35 Pin	
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22 Bolt M6x18 2 23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
23 Location Board 1 24 Hex-Screw M6x32 2 25 Clip Screw 2 26 Roller Pin A10x65 1 27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
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27 Seat 1 28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
28 Hex Screw M6x18 6 29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
29 Pin A 1 30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
30 Hex Screw M5x12 1 31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
31 Roller 1 32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
32 Washer 05 1 33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
33 Roller Sheath 2 34 Fixed Bar 1 35 Pin 1	
34 Fixed Bar 1 35 Pin 1	
35 Pin 1	
36 Location Screw	
1 00 120041011 001011	
37 Long Screw 1	
38 Square Neck Screw 1	
39 Screw 2	
40 Movable Bar 1	
41 Protective Cover 1	
42 Twisting Spring 1	
43 Movable Cover 1	
44 Spring 1	
45 Hex Screw M5x12 2	
46 Back Plate 1	
47 Push Pin 1	
48 O-ring 1	
49 Nut M5 1	
50 Frame 1	
51 Plastic Ball 1	
52 Washer 012 1	

Part	Description	Qty
53	Nut M12	1
54	Dust Bag	1
55	Screw M5x10	4
56a	Middle Cover	1
57	Bearing 629	1
58	Retaining Ring 010	1
59	Cross Head Screw M5x10	4
60	Gear	1
61	Half-round Key	1
62	Shaft	1
63	Bearing Seat	1
64	Bearing 629	1
65	Cross Head Screw M4x16	2
66	Cover	1
67	Cross Head Screw M4x10	3
68	Washer	1
69	Location Ring	1
70	Saw Blade	1
71	Clip Washer	1
72	Washer 08	1
73	Bolt M8x25	1
74	Cross Head Screw M5x28	4
75	Washer 05	4
76	Flat Washer 05	4
77	Cross Head Screw M4x18	2
78	Plastic Washer 04	15
79	Flat Washer 04	15
80	Up Handle	1
81	Square Nut M5	4
82	Switch	1
83	Down Handle	1 1
84	Cross Head Screw M4x12	2
85	Cross Head Screw M4x18	3
86	Press Board	1
87	Screw ST4. 2x30	2
88	Rear Cover	1
89	Carbon Brush	2
90	Brush Box	2
91	Body	1 1
92	Cable Sheath	1 1
93	Cable	1 1
94	Bolt	2
95	Rod	4
96a	Stator	1 1
97	Bolt	2
98	Cross Head Screw M4x58	2
99	Wind Shield	1 1
100	Rubber Bearing Cap	1 1
101	Bearing	1 1
102a	Rotor	2
103	Bearing 629	1 1
104	Pivot Bracket	1 1

REV 12/01; 04/02; 08/06

Assembly Drawing

